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OKC - 0333

25 February 1960

MEMORANDUM FOR : Deputy Director (Plans)

THROUGH : Acting Chief, DPD []

SUBJECT : OKCART Status as of 24 February 1960

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EXPIRY DATE: 1982
AUTH: []
DATE: 5 Feb 82 REVIEWER: []

1.

2. (a) I. G. system:

This is biggest problem now unresolved. MI have revised cost estimate from original [] test 25X1 support.

[] is as accurate as MI system but twice size and weight; [] is one third less accurate and 30% heavier than MI system.

LAC have been asked to get price quote from [] despite their preference for MI since MI price is still well above preliminary estimates 25X1

(b) Autopilot and stability augmentation:

This is lower in price than expected by LAC. By drawing heavily on F104 AFCS the development charges have been reduced. Price for development and production of 12 units is estimated at just under [] 25X1 per month during initial field tests. LAC insists on linear system rather than adaptive for the reason that the adaptive system is constantly "adapting". They have not indicated that the amplitudes and periods of these excursions have been calculated to see if they are in fact too large for camera stability requirements. Although MI have an adaptive system in flight test there is much more experience in linear systems. The linear

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system requires estimates of aircraft stability derivatives to allow initial design of the system. These estimates are verified later by wind tunnel tests and still later in flight tests. If initial estimates add/or w/t data are in serious error with flight test results costly and untimely redesign is necessary.

In this design this is a danger since the supersonic aeroelastic problems are compounded by the thermoelastic severity. However, MH claim they can produce successfully on time.

3. J-58 engine:

Engine development is technically healthy but afflicted with a few administrative hiccups. The fuel additive experiments are estimated to cost about [] through next July, when the system should be definable.

P & W had planned on a system with many redundant control over many variables.

[] believes a flow control sensitive to gas temp. is the only control needed. P & W are reviewing LAC estimates of AB optimization points and hope to produce a fractional percentage better a/c. Fuel developments indicate we can count on 19,000 - 19,100 BTU/lb.

P & W have a few other fractional percentages better performance in the sleeve as insurance not yet disclosed to LAC.

The extent of activity at W. Palm Beach is causing speculation and drawing attention. The J-58 cover application is wearing thin with declining AF interest in B-58C.

4. Camera:

FE have reduced their estimate to [] EK propose 21" FL and FE 18" but they have been urged to try for an increase.

Jim Baker is reluctant to comment comparatively but EK have discussed their proposal with Din Land and he may be less reticent. This decision seems to reduce to the desirability of carrying EK further as a fall back in the unhappy event the FE become plagued with "C" camera type difficulties.

5. A-12 spec:

Latest performance estimates agree with data given by LAC 21/22 Jan. Our estimates differ in detail (e.g. amount of fuel used in climb) but not in overall altitude distance profile without taking account of reduced gravitational attraction at altitude and centrifugal lift. The thinnest point is fuel reserve at second refuelling. There is no margin for a mistake here.

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6. BOB query:

Mr. Macy questioned our right to proceed without further White House review. Mr. Dulles' letter to BOB, being circulated for coordination, assures Mr. Macy that no further review at that level was needed.

7. Convair close-out:

To what extent if any should any Convair people be knowledgeable?

SIGNED

EUGENE P. KIEFER

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Attachments:

Three sketches

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